

### **ABSTRACT**

In a mobile environment, a mobile device includes an attached memory stick (removable memory) having a high speed - memory and storage with direct memory access embodied in an integrated circuit chip coupled to an ultra-wideband (UWB) transceiver. The mobile device communicates with other like base devices, portable or stationary, via UWB transmissions using pulse bursts up to 1 Gbit per second. Data transfers between the devices occur in the simplex or duplex mode, after a low power communication connection is established between the devices. The communication link between the devices is in the range of 10-20 meters. The communication system allows existing device bus interfaces (which are much slower than ultra-wideband transmissions) to communicate between the fast read/write cycles of the memories integrated within the memory stick. Duplex transmission can occur by pulse interleaving sending side transmitters and receiving side transmitters.